

**IN THE CLAIMS**

1.- 21. cancelled.

22. (new) A method for diagnosing diseases or pathological conditions in a human patient comprising carrying out an ion mobility spectrometry measurement (IMS) on a bodily sample obtained from said patient, thereby determining an amount of ions formed by at least one biogenic amine contained in said sample.

23. (new) The method of claim 22, wherein said bodily sample is a sample of vaginal fluid, wherein said at least one amine comprises trimethylamine, and wherein said pathological conditions comprise vaginal disorders.

24. (new) The method of claim 22, wherein said at least one amine comprises more than one biogenic amine.

25. (new) The method of claim 24, wherein said amines comprise putrescine and cadaverine.

26. (new) The method of claim 22, further comprising calculating a ratio of the amounts of ions formed by different biogenic amines in said sample.

27. (new) The method of claim 26, comprising calculating the ratio of the amounts of ions formed by trimethylamine and ions formed by all biogenic amines present in said sample, and diagnosing the presence of bacterial vaginosis if said ratio is 0.4 or more.

28. (new) The method of claim 26, comprising calculating the ratio of the amounts of ions formed by trimethylamine and ions formed by all biogenic amines present in said sample, and diagnosing the absence of bacterial vaginosis if said ratio is 0.2 or less.

29. (new) The method of claim 22, wherein abnormally high amounts of putrescine or cadaverine indicate a pathological condition.

30. (new) The method of claim 23, wherein said vaginal disorder is bacterial vaginosis.